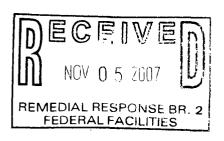
LPC 0316005885 - Cook Co. Peoples Gas Division Street Station -- Chicago Superfund/HRS ILD 982 074 783 **CERCLA** SITE REASSESSMENT Illinois Environmental Protection Agency EPA Region 5 Records Ctr.

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SITE REASSESSMENT

For:

Peoples Gas Division Street Station 1241 Division Street, Chicago, Illinois ILD 982 074 783

Prepared by:
Illinois Environmental Protection Agency
Bureau of Land
Office of Site Evaluation

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September 5, 2007

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Section 1.0 Introduction

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On April 11, 2007, the Illinois Environmental Protection Agency's (Illinois EPA)

Office of Site Evaluation (OSE) was tasked by the Region V Offices of the United States

Environmental Protection Agency (U.S. EPA) to conduct a Comprehensive

Environmental Response, Compensation, and Liability Act (CERCLA) Site

Reassessment at the previous location of the Division Street Peoples Gas coal gasification
site at 1241 Division Street, Chicago, Illinois, 60622. This property is located in of
Section 5, Township 39 north, Range 14 east of Third Principal Meridian. Latitudinal
and longitudinal coordinates of the property are 41.90340 North and 87.65980 West.

Current U.S. EPA policy stipulates that a Site Reassessment be conducted to determine the current status of the Peoples Gas Division Street Station Site. This Site Reassessment will consist of an evaluation of recent information to determine if further Superfund investigation is warranted. The reassessment will supplement previous assessment work, and is not intended to replace previous CERCLA assessments.

The Site Reassessment is designed to provide necessary information that will help determine if the site qualifies for possible inclusion on the National Priorities List, or should receive a No Further Remedial Action Planned (NFRAP) designation. At the end of the reassessment process the author will recommend that the site may be given a NFRAP designation, receive further Superfund investigation, or referred to another state or federal clean-up program.

The Division Street Station Site was placed on the Comprehensive Environmental Response, Compensation, and Liability Information System (CERLCIS) in January of 1988. In April of 1988, Illinois EPA completed the CERCLA Preliminary Assessment

and the CERCLA Site Inspection of the site in December of 1988. The site was archived from CERCLIS in December 1988. The site was again placed into CERCLIS in April 2007.

The Site Reassessment Report will describe current site conditions and illustrate how the site has changed since the Site Inspection. This report will contain a review of existing information to determine site history, current site conditions, and evaluate analytical data that may exist on the site. The Site Reassessment will also support emergency response or time-critical removal activities if it is determined that they are warranted.

Section 2.0 Site Background

Section 2.1 Site Description

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On July 31, 2007 personnel from the Illinois EPA's OSE conducted a Site Reassessment reconnaissance and evaluation of the former Division Street Station gas plant located 1241 Divison Street in Chicago, and is west of the North Branch of the Chicago River. The former gas plant is bordered by West Division Street on the north, North Elston Avenue on the northeast and east, West Cortez Street (Wade Street) on the south, and the Chicago and Northwestern Railway on the west. The former plant site also included property between North Elston Avenue and the North Branch of the Chicago River which was historically used for storing coke and coal. The site is located in Section 5, Township 30 North, Range 14 East in Cook County, Illinois and encompasses

approximately 14 acres. Latitudinal and longitudinal coordinates of the property are 41,90340 North and 87,65980 West.

The site is located in the 7th Congressional District. The site is comprised of nine properties according to the Cook County Assessor's Office. These properties west of Elston Avenue include: 1220 W. Cortez Street (PIN: 17-05-306-007-0000), 1110 N. Elston Avenue (PIN: 17-05-306-006-0000), 1241 W. Division Street (PIN: 17-05-306-014-0000), 1243 W. Division Street (PIN: 17-05-306-012-0000). The remaining five properties are located to the east of Elston Avenue and include: 1189 N. Elston Avenue (PIN: 17-05-307-007-0000), 1153 N. Elston Avenue (PIN: 17-05-307-003-0000), 1159 N. Elston Avenue (PIN: 17-05-307-006-0000), and two properties without addresses (PIN: 17-05-307-005-0000 and 17-05-307-008-0000).

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Construction of Peoples Gas Light and Coke Company (Peoples Gas) Division Street Station manufactured gas facility was completed in 1883 and gas manufacturing operations began the following year. The site was the first one in the Chicago area designed and built exclusively for the manufacture of carbureted water gas. From 1885 to 1887, the plant was operated by the Illinois Light, Heat and Power Company. In 1887, Illinois Light consolidated with Peoples Gas. Production operations ceased at the site sometime before the facility was dismantled in 1962. Sanborn mapping shows the property between North Elston Avenue and the North Branch of the Chicago River was used to store coke and coal. This parcel was subsequently subdivided and sold to the City of Chicago who currently operates a marina, and a private individual who operates a tavern. The remainder of the site is currently owned by Peoples Gas and is used for office space and gas meter storage and repair in the main building, a maintenance

building, warehouse and storage buildings, material storage bins, office buildings, one 12,000-gallon gasoline underground storage tank (UST), and one 12,000-gallon diesel fuel UST. The site and the surrounding area are zoned for commercial and industrial use. The nearest residential properties are one block south of the site.

The Division Street Station was a gas manufacturing facility throughout its operational life and generated gas by the carbureted water gas method. Waste products associated with water gas generation which may pose environmental concern include tar and hydrocarbon sludges/emulsions, purifier wastes, and other solid wastes including coke fines and ash. Polynuclear aromatic hydrocarbons (PNAs) and volatile aromatics are the primary contaminants associated with coal tar sludges and emulsions. Trace metals, sulfides, and cyanides are the primary contaminants associated with purifier and other solid wastes.

Coal tars and hydrocarbon emulsions or sludges were concentrated in several process facilities during gas generation including: condensers, scrubbers, tar separators, tar wells, tar tanks, and gas holders. Purifier and other solid wastes at similar sites were typically temporarily spread out over the ground surface of the facility and then disposed of off-site. This process is referred to as revivification for reuse.

Section 2.2 Site History

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In the early 1900s, gasification plants were operated in Illinois to supply low British thermal unit (BTU) gas to residential, commercial and industrial customers. By the early 1930s, natural gas became more plentiful within Illinois and it was no longer

economical to operate these gas plants. A gas plant was typically operated by a local light and power company within each major community.

The Division Street Station was used as a production facility for manufactured gas. Construction of the plant was completed in 1883 by Peoples Gas, and gas manufacturing operations began the following year. During this time, two gas holders were in place, a one million cubic foot water-sealed gas holder and a 500,000 cubic foot relief holder. The one million cubic foot gas holder consisted of two steel lifts and a steel water tank with a diameter of 149 feet. The relief holder consisted of one steel lift with a diameter of 124 feet. From 1885 to 1897, the plant was operated by the Illinois Light, Heat and Power Company. In 1897, Illinois Light consolidated with Peoples Gas.

A three million cubic foot water-sealed holder was built in 1888 and consisted of three steel lifts and a 185 foot diameter water tank. These water-sealed gas holders stored gas in the steel lifts which were sealed with water. Each lift was connected to the outer structure of the holder which allowed the lift to collapse into the one below.

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A ten million cubic foot tar-sealed (waterless) gas holder was constructed in 1929 near the southern site boundary. The waterless holder was constructed of exterior steel plates which formed a polygonal shape in plan view. Within the shell, a piston moved up and down by way of rollers attached to the exterior shell as gas was introduced or withdrawn. The weight of the piston provided constant gas pressure. The edges of the piston were sealed with a packing ring consisting of a trough and packing cloth. The trough was filled with tar (sometimes a petroleum based oil) supplied from pumps within tar wells or sumps placed along the exterior base of the holder. The tar wells collected tar which leaked from the packing ring and ran down the interior wells or precipitated from

the gas and accumulated at the base of the holder. Pumps within the tar wells kept the tar level constant within the packing ring by use of floats.

The one million cubic foot water-sealed holder was damaged in 1930 when an airplane crashed through the crown of the holder. The gas escaped the holder without ignition and the holder was dismantled in 1931.

In 1933, an oil gas process was experimented with, but failed to produce sufficiently higher grade gas to warrant the machinery changes required for conversion. A newly developed high British thermal unit (BTU) carbureted water gas method was adopted at the site in 1936 and a mixing plant was installed in 1944 to combine manufactured and natural gas. The following paragraphs describe the carbureted water gas production method in general.

Water gas, or blue gas, was produced by placing coke in a furnace called a generator. The coke was ignited and heated to approximately 1400 degrees Fahrenheit. Gas was made by passing steam across the incandescent coke, producing a methane gas called blue gas. The gas was enriched by cracking oil in the presence of the blue gas or steam.

Gas produced by this method contained impurities of tar and hydrogen sulfide that were removed prior to use. Tar was removed by passing the gas to a hydraulic main which consisted of a large horizontal pipe or tank. The main was partly filled with water in which the gas pipes were immersed. The gas was then pumped through scrubbers and condensers consisting of large steel tanks filled with water and cooling pipes. The gas was passed through the pipes where it was cooled, and tar was precipitated. The tar was then pumped into a tar pit and was usually sold.

From the condenser, the gas was passed through the purifier. The purifier typically consisted of several boxes connected in series, containing wooden crates with wood chips spread across them. The chips were treated with a solution of ferric oxide which reacted with the hydrogen sulfide, forming ferrous sulfide. As the sulfides were absorbed, the chips turned blue and lost their effectiveness. The spent chips were removed from the purifiers and placed in the reviving house, whereby ferric oxide was again formed by oxidation of the ferric sulfides, and free sulfur liberated. This process was called revivification. The alternating sulfuring and revivification was continued until the material contained 50 to 60 percent sulfide. It was then usually incapable of absorbing more hydrogen sulfide because of the clogging action of free sulfur, the formation of more or less inert iron compounds, and residual tar that adhered to the chips. The chips were removed and discarded at this point. The method of disposal of the spent purifier wastes at the Division Street Station was unavailable from the Peoples Gas files. After purification, the gas was pumped into a holder until it entered the pipeline and was sold.

Site plans dated 1914 and 1951 and city fire insurance (Sanborn) maps of Chicago showing the gas production facilities have been provided by Peoples Gas. The approximate locations of the former site facilities were determined from these maps. The Division Street Station contained a number of gas purification and scrubbing facilities, and apparently used a three-stage purification process, passing through purifiers, shaving scrubbers, and condensers. However, the precise sequence of the gas purification processes at this plant is unknown. Tar sewers were used to transfer tar from condensing and purification structures to tar storage tanks.

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The facility was taken out of operation sometime prior to dismantling in 1962. Specifications for the dismantling activities were not available. All former buildings associated with gas manufacturing processes have been razed. The property east of Elston Avenue along the North Branch of the Chicago River was sold by Peoples Gas on an undetermined date. This area is presently a marina and tavern. The remainder of the site is currently owned by Peoples Gas and is used for office space and gas meter storage and repair.

Section 2.3 Regulatory Status

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Based upon available file information, the Peoples Gas Division Street Station does appear to be subject to Resource Conservation and Recovery Act (RCRA) corrective action authorities (http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility). Information currently available does not indicate that the site is under the authority of the Atomic Energy Act (AEA), Uranium Mine Tailings Action (UMTRCA), or the Federal Insecticide Fungicide or Rodenticide Act (FIFRA). Peoples Gas has however, entered the site into the State of Illinois' Voluntary Cleanup Program.

Section 3.0 Field Inspection Activities

Section 3.1 Field Inspection

A reconnaissance inspection was conducted at the site in July 2007 by personnel of the Office of Site Evaluation of the Illinois EPA. A site reconnaissance of the former Division Street Station property and the surrounding area was conducted to determine the physical property boundaries and survey the properties at its perimeters. The survey of the surrounding area was done to determine land usage of the neighboring properties as

well as any pathway or receptors that potentially may be affected by the site. No visible structures from the gasification plant were present. The site is operated by Peoples Light and Gas Company for meter repair. The site is surrounded with a locked fence and is mostly paved asphalt. Current surrounding properties consist of Cortez Street to the south and beyond by commercial property, active railroad tracks to the west and beyond to the Kennedy Expressway, West Division Street to the north and beyond by commercial property and Elston Avenue to the east and beyond by commercial property.

Section 3.2 Analytical Data

The report entitled Former Division Street Station, Remedial Action Completion Report, dated March 2006 by Burns and McDonnell states that in general, surface soil throughout the site exceeded Illinois Voluntary Cleanup levels for lead and certain polynuclear aromatic hydrocarbon (PAH) constituents, but PAH concentrations decreased with depth. Contaminant levels for benzene, toluene, ethylbenzene, xylenes (BTEX) and naphthalene were exceeded in samples collected from, within, or near the areas of source material. Benzene, benzo(a)anthracene, naphthalene and cyanide were elevated in groundwater samples.

In March 2007, sediment samples were collected in the North Branch of the Chicago River to determine the impacts of the former MGP located on Division Street. The results of this investigation included two sediment sample borings and Tar-specific Green Optical Screening Tool (TarGOST) samples and are documented in Peoples Gas: Division Street Station Site, Site Summary; Evidence of Impacts, which is still in draft form. Each sediment boring was sampled from three different depths. The sediment

samples were collected near the north end of the property. Sediment sample locations are depicted in Figure 4. The sediment sample results revealed contaminants above the Ecotox thresholds for benzene, toluene, ethylbenzene, xylenes, naphthalene, acenaphthene, dibenzofuran, fluorene, phenanthrene, fluoranthene, pyrene, benzo(a)pyrene, and PAHs. The sediment sample results can be found in Table 1.

TarGOST employs fluorescence measurements made directly on the soil or sediment subsurface. Poly-cyclic aromatic hydrocarbons (PAH's) present in the soil or sediment react differently to pulses of laser light depending on their concentrations. The light is absorbed and subsequent fluorescence occurs which is then collected by optic fibers, measured and compared to a known response of coal tar. Based on the response, estimations can be made with regard to concentrations of coal tar in the soil or sediment (Germain and Peterson).

According to October 2000 and August 2002 Survey of Sediment Contamination in the Chicago River, Chicago, Illinois, U.S. EPA Great Lakes National Program Office, June 2003, documents the presence of PAHs at elevated levels. As shown in the attached figure, U.S. EPA sediment sampling location ChR00-03 is adjacent to the site. The boring logs and photographs show that coal tar, staining, and oily sheens were observed.

Section 3.3 Previous Investigations

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Environmental conditions at the Site are described in site investigation reports dated 1992, 1999, 2000, 2001, 2002, 2003, 2006, and 2007. Remediation activities to address impacted materials were conducted from 2003 to 2005. Areas on site were excavated to at least 3 feet below ground surface (bgs) and backfill materials were

brought in to replace the excavated materials. After backfilling, an engineered barrier was installed to prevent the further spread of contaminants. Approximately 164,000 tons of excavated material and over 1 million gallons of water associated with the excavation were disposed of as part of the remediation process. Post-remediation sampling data indicate that elevated levels of certain contaminants still exist on site, although barriers are in place to prevent direct contact exposures. In addition, impacted material was left in place between the gas holder wall and the railroad tracks where remediation was deemed impractical.

Section 4.0 Potential Sources

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During the field activities, soil impacts were observed to varying degrees in samples obtained from the site. Coal tar impacts were observed in several soil samples. Underground structures which may still exist at the site and may be of concern include the underground portions of the gas holder water tanks, tar wells and underground tar storage tanks associated with the tar-sealed gas holder, tar settling tanks, tar sewer piping, underground oil storage tanks, and three underground storage tanks near the oil storage tanks.

Six areas of source material (discussed in Section 4.1) were identified at the site from varying depths of one to thirty-one feet bgs, based on visual observation and analytical results.

Section 4.1 Contaminated Soil

According to the Hazard Ranking Score (HRS) definition of a source when referring to contaminated soil, any area where a hazardous substance has been deposited,

stored, disposed, or placed, plus those soils that have become contaminated from the migration of a hazardous substance is considered a source.

During the initial remedial investigation of the site there were various areas of concern identified. These areas include: (1) The area of the former above ground tar tanks and underground tar settling tanks at the northeast area of the site. (2) The area in the vicinity of the former shaving scrubbers at the north end of the site. (3) The area in the vicinity of the former light oil plant. (4) The area in the vicinity of the former 500,000 cubic foot gas relief holder along the northwest area of the site. (5) The area in the vicinity of the former underground oil tanks in the central area of the site. (6) The area west of the current diesel and gasoline fueling area. These areas were addressed in the voluntary remediation of the site. However, an area of source material still exists at the site between the gas relief holder wall and the active railroad to the west of the site.

Contaminants excavated from the Division Street Station include: PNA's, PAH's, benzene, toluene, ethylbenzene, and xylene (BTEX) and lead. Since the construction of the facility, these sources may have leached these hazardous constituents to the North Branch of the Chicago River.

Section 5.0 Pathway Discussions

Section 5.1 Groundwater

Groundwater resources in the Chicago region are developed from four aquifer systems: 1) sand and gravel deposits of glacial drift; 2) shallow dolomite formations, mainly of Silurian age; 3) Cambrian – Ordovician Aquifer, of which the Ironton – Galesville and Glenwood – St. Peter Sandstones are the most productive formations; and

4) the Mt. Simon Aquifer, consisting of sandstone of the Mt. Simon and lower Eau Claire Formations of Cambrian age.

Water-yielding localized sand and/or silt lenses, and to a greater extent, sand and gravel deposits, occur in the drift, particularly in valleys cut into bedrock. Silurian age dolomite, which is widely used as a source of groundwater, is the upper most bedrock formation in the region and considered as the shallow dolomite aquifer. The glacial drift and the shallow dolomite aquifers are hydrologically connected and are recharged directly by seepage from precipitation. They are separated from the Cambrian – Ordovician Aquifer in most of the region by the relatively impervious Maquoketa Group Shale. The Cambrian - Ordovician Aquifer rises westward and is recharged at the surface or through glacial deposits west of the outcrop area of the Maquoketa Shale along the western edge of the Chicago region (beyond the western boundaries of Lake, Du Page. Cook, and Will Counties) (Willman, 1971). The Cambrian – Ordovician Aquifer is separated from the Mt. Simon Aquifer by the shale and silty beds of the Eau Claire Formation that prevents flow between the aquifers. The Mt. Simon Aquifer has a higher artesian pressure than the other aquifers, but the water quality in the eastern part of the Chicago region is not acceptable for many uses. This aquifer is recharged largely from the outcrop region of Cambrian rocks in central southern Wisconsin (Willman, 1971).

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The Cambrian – Ordovician Aquifer has been the most highly developed bedrock aquifer, however, approximately 60 percent of the total pumpage in the Chicago region is from the glacial drift and shallow dolomite aquifer with no widespread decline in water level.

After reviewing the geology, groundwater usage of the area, and the Groundwater Quality Standards (35 IL Adm. Code Part 620), the groundwater beneath the site can be classified as Class II groundwater. The determination was based on the following: no potable water supply wells are within the minimum setback zone, no sandstone greater than 10 feet thick or fractured carbonate greater than 15 feet thick exists, and 99% of all water within the Chicago distribution area is supplied by the City of Chicago with water from Lake Michigan. In addition, hydraulic conductivity was determined at an adjacent site to be between 5.37 X 10⁻⁹ and 2.43 X 10⁻⁹ centimeters per second.

As indicated earlier there can be adequate groundwater reserves within the various aquifers in the Chicago region. However, the City of Chicago draws water from Lake Michigan and distributes it throughout the metropolitan and suburban transmission system for drinking water purposes. The City of Chicago also has a groundwater ordinance that prohibits the installation of new potable water supply wells within the city limits (Appendix C). The Illinois State Geological Survey (ISGS) and the Illinois State Water Survey (ISWS) indicate that there are four wells completed in the shallow dolomite aquifer system and sixteen completed within the Cambrian-Ordovician aquifer system. These 20 wells are used for industrial purposes within a four mile radius of the Division Street Station Site (Appendix A).

Wast

Impacted materials have been identified in subsurface soils near many former MGP structures at the Site including the gas holders, tar wells, underground tar settling tanks, underground storage tanks, the light oil washers and light oil plant, purifying houses, and the oil pump house. Although more than 160,000 tons of materials were removed from the Site during the remediation completed in 2005, soils exhibiting coal tar

odors and staining and impacted with tar or other contaminants remain in place in certain areas.

During excavation activities to remove source material in and adjacent to the former 517.224 cubic foot gas relief holder, some source soils could not be removed without endangering the stability of the adjacent railroad line. In the northeast portion of the Site (near the former underground tar settling tanks) tar was observed extending beneath Elston Avenue beyond the extent of allowable excavation.

Conditions under the existing buildings on site have not been investigated, and impacted soils were probably left in place under these buildings during the recent remediation. Impacted materials were found and excavated at the northern corner of the existing main building (near the former underground tar settling tanks), and also on the southwest side of this building (near the former underground storage tanks, underground oil tanks, and oil pump house).

Section 5.2 Surface Water

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Although there is a possibility that contaminated soils still exist at the Division Street Station Site, it is essentially covered by buildings or a paved parking lot. These barriers would inhibit the exposure of on-site soil from migrating to nearby surface waters. Excess surface water is channeled into surrounding storm sewers that eventually enter the City of Chicago's combined sewer system. Water in this system is treated at the sewage treatment facility before being discharged to a surface water body.

Conditions in the sediments in the river adjacent to the Site were investigated by Burns & McDonnell in 2007. This investigation was conducted using the TarGOST instrument to identify locations where MGP-related non-aqueous phase materials are

present in the river sediments. In addition, conventional borings were installed to collect sediment samples at two locations. The TarGOST logs indicate that the sediments in the river adjacent to the Site are impacted by MGP-related non-aqueous phase materials. The boring logs and photographs show that coal tar, staining, and oily sheens were observed in sediments collected from the river.

Hazardous chemicals associated with the MGP site have migrated from the site to the North Branch of the Chicago River by flowing by a path of least resistance next to a sewer pipe. The Probable Point of Entry (PPE) would most likely be within the North Branch of the Chicago River just to the east, adjacent to the site. From the PPE, surface waters flow in a southerly direction for approximately 1/2 mile to where the North and South Branches of the Chicago River join. Surface water continues to flow in the South Branch of the Chicago River in southwesterly direction for an additional 4 miles. At that point the South Branch of the Chicago River joins with the Chicago Sanitary and Ship Canal. The 15-mile Target Distance Limit is achieved within the waters of the Chicago Sanitary and Ship Canal at a point just west of Summit, Illinois. Figure 6 depicts the 15-mile surface water route.

According to the Illinois Department of Natural Resources, the North Branch of the Chicago River is classified as a fishery and contains bullhead, carp, and sunfish with smaller species of sport fish. The Chicago Ship and Sanitary Canal is classified as a fishery and supports mainly carp and other less desirable species. Neither surface water body supports and state or federally endangered species.

According to the Federal Emergency Management Agency (FEMA), the site is located outside the 100 year floodplain of the North Branch of the Chicago River.

According to National Wetland Inventory maps, no wetland areas can be found within the boundaries of the site.

Section 5.3 Soil Exposure

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Due to the remediation that has occurred at the site, there is a minimal threat from the possibility of soil exposure. Remediation procedures removed contaminated soil from the area. Soil removal consisted of approximately 338,770 tons of non-hazardous special waste. An unknown amount of contaminated soil was left in place between the gas relief holder wall and the active railroad to the west of the site. Sediment samples revealed 14 semi-volatiles above the Ecotox Thresholds (1996).

Direct contact to potentially contaminated soils is greatly diminished due to the presence of buildings, sidewalks, and parking lots. These barriers would protect on-site workers from exposure to potentially contaminated soil at the site. The site is also surrounded by a maintained fence with a guard stationed at the entrance. The fence is closed with access granted with the use of a keyed card. The area of contaminated soil which still exists on the site is surrounded by a chain link fence with caution tape and signs surrounding this area. It is estimated that 58,566 people reside within one mile of the site. There are no known residences, schools or daycare facilities within 200 feet of the site.

Nearby population within one mile of the site

Distance (miles)	Population			
On-Site	20			

0 - 1/4 mile	956
1/4 - 1/2 mile	6741
½ - 1 mile	50939
Total	58566

Section 5.4 Air Route

The majority of the Division Street Station Site is covered by a building or an asphalt parking lot. In addition, contaminated soil was removed, prior to the installation of the parking lot. The presence of a structured barrier would inhibit gas or particulate material from being suspended. Due to these conditions, the air route was not evaluated.

Population within four miles of the site

Distance (mi)	Population
On-Site	20
0 – 1/4 mile	956
1/4 - 1/2 mile	6741
½ - 1 mile	50939
1 – 2 miles	203752
2 – 3 miles	209410
3 – 4 miles	2644598
Total	736416

Section 6.0 Summary

Illinois EPA's Office of Site Evaluation was tasked to evaluate the Division Street Station Site and determine its impact to the surrounding human populations, nearby surface waters and area groundwater. This evaluation utilized existing data from the Division Street Station Site.

The Division Street Station Site occupies approximately 14 acres and is located within the City of Chicago, Cook County, Illinois, 60622. According to historical maps of the facility, the Division Street Station has had two gas holders, a one million cubic foot water-sealed gas holder and a 500,000 cubic foot relief holder. A three million cubic foot water-sealed holder was built in 1888 and consisted of three steel lifts and a 185 foot diameter water tank. A ten million cubic foot tar-sealed (waterless) gas holder was constructed in 1929 near the southern site boundary, but was dismantled in 1931. A newly developed high British thermal unit (BTU) carbureted water gas method was adopted at the site in 1936 and a mixing plant was installed in 1944 to combine manufactured and natural gas. The facility was taken out of operation sometime prior to dismantling in 1962. All former buildings associated with gas manufacturing processes have been razed.

Remediation under the Illinois Voluntary Site Remediation Program has occurred. Many historical structures and hazardous constituents have been removed and disposed of from the site. Soil removal consisted of approximately 338,770 tons of non-hazardous special waste. An unknown amount of contaminated soil was left in place between the gas relief holder wall and the active railroad to the west of the site. This area was discussed when conducting a reconnaissance of the facility. This area is to be addressed sometime in the unspecified future. Currently, the site is utilized by Integrys (formerly Peoples Gas) for a meter repair station.

The site is mostly covered with impermeable objects such as buildings and parking lots. These objects appear to provide a barrier and limit the migration of potentially contaminated soils from the site to nearby targets. These barriers will limit

the infiltration of rainwater through potentially contaminated soil into the groundwater beneath the site. These impermeable objects would also limit the exposure to on-site workers or patrons of one of the active businesses through direct contact and prevent particulate material from blowing from the site via the air migration pathway.

The Division Street Station is located just west of the North Branch of the Chicago River. Hazardous chemicals associated with the MGP site have migrated from the site to the North Branch of the Chicago River by flowing by a path of least resistance next to a sewer pipe. The North Branch of the Chicago River is considered a fishery. It is unknown at this time the amount of fish caught and eaten from the North Branch of the Chicago River. Even though the majority of the source material from the site has been removed, impacts from the MGP site are still evident in the sediments of the North Branch of the Chicago River.

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- Burns and McDonnell. Former Division Street Station, Remedial Action Completion Report. March 2006.

Figures and Tables

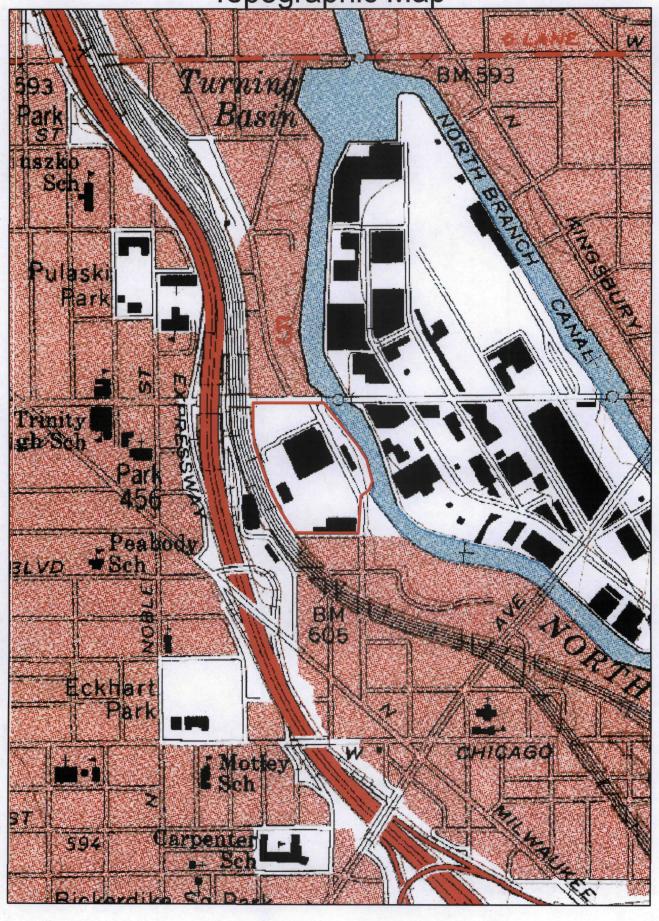
Figure 1 Site Location Map



Figure 2 Site Area Map



Figure 3 Topographic Map



Miles

0.4

0.05 0.1

0.2

0.3



Figure 4 USEPA Sediment Sample Locations 2000



ENVIRON

Division Street Station and Sediment Sample Locations

Figure 5 Historical Map with Boring Locations

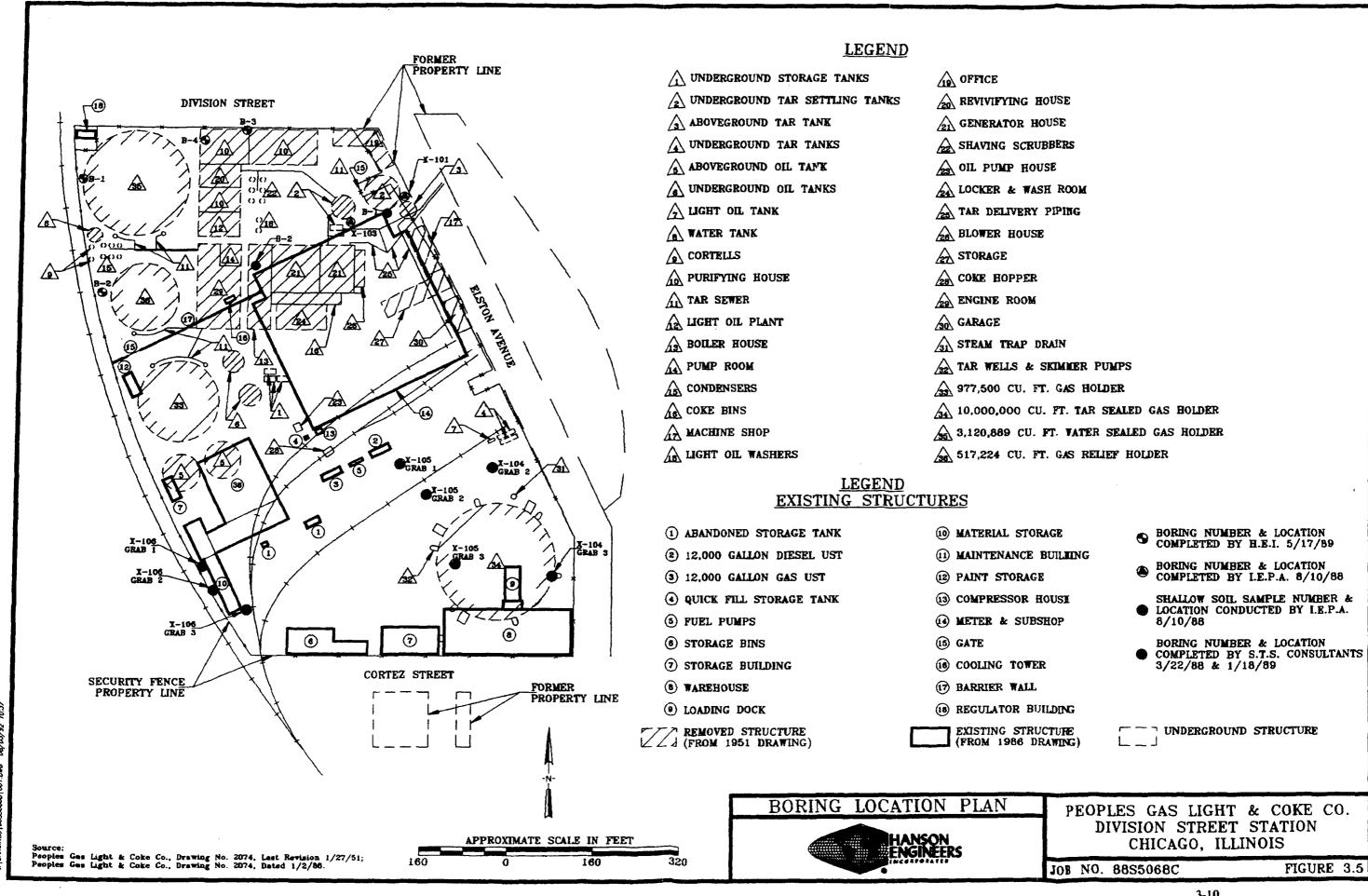
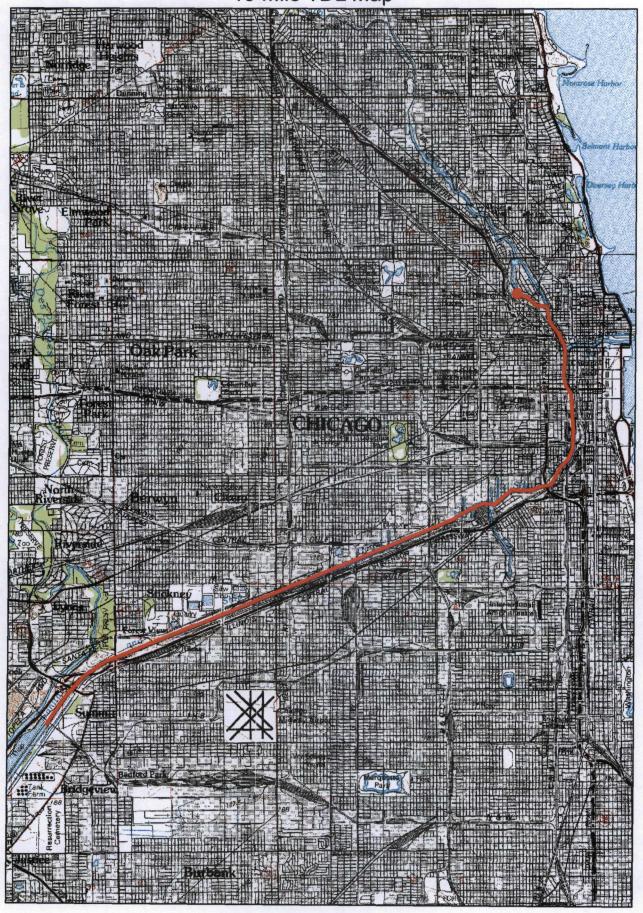


Figure 6 15 Mile TDL Map



Miles



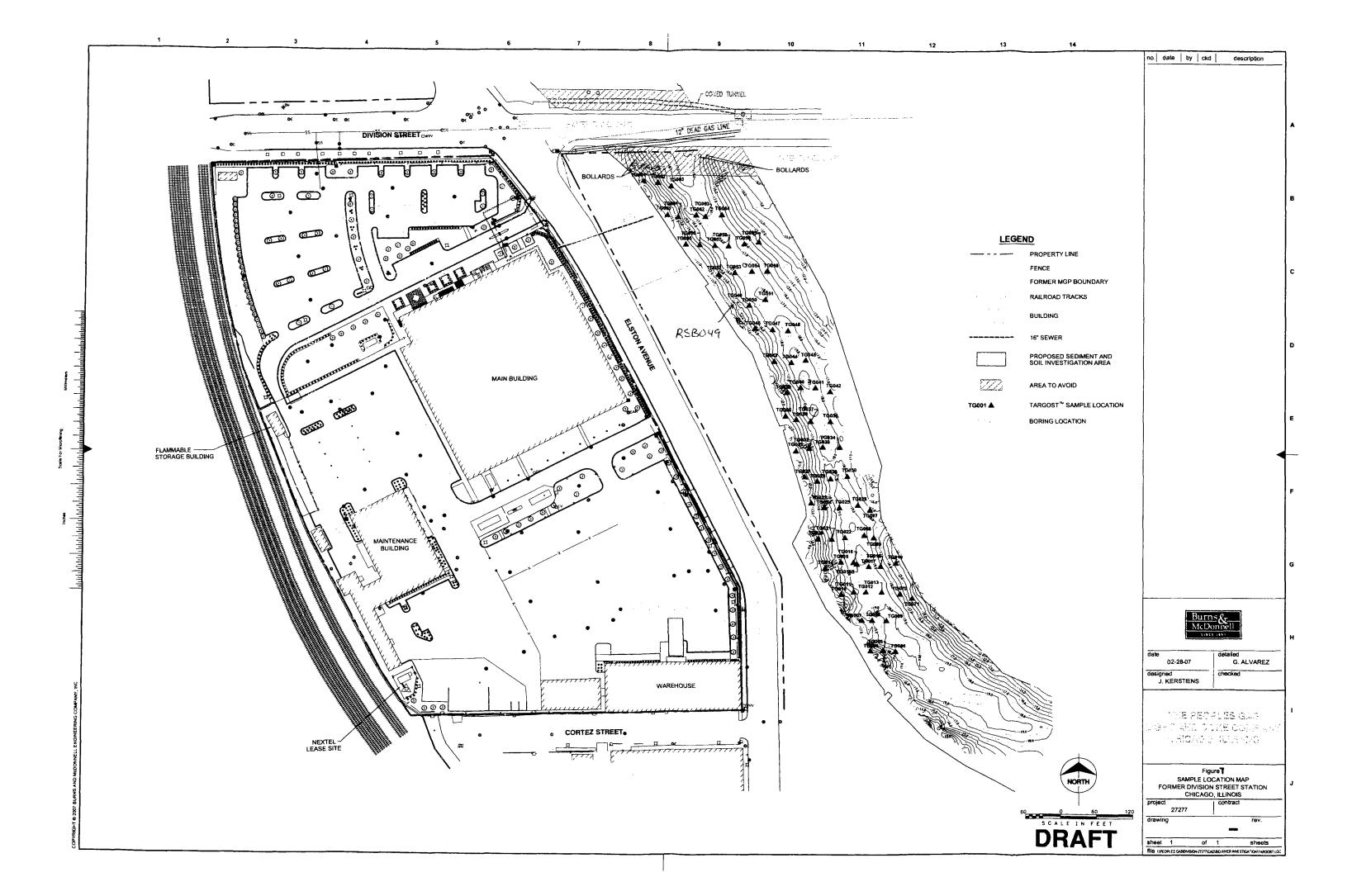


Figure 8 4 Mile Radius Map

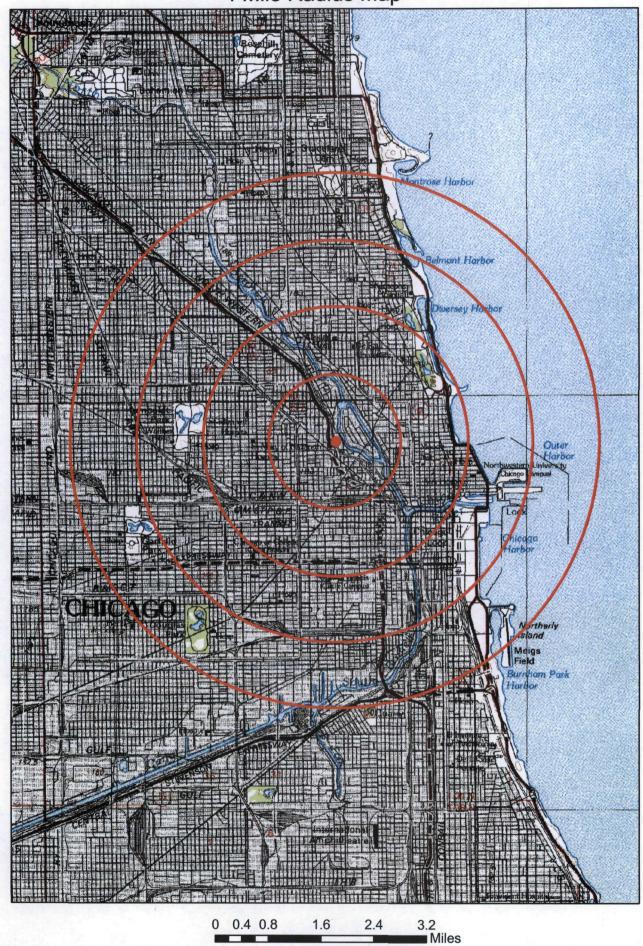




Table 1
Analytical Results from META Environmental (2007)

Sample #	Ecotox Thresholds	DSS-RSB-001-001	DSS-RSB-001-002	DSS-RSB-001-003	DSS-RSB-049-001	DSS-RSB-049-002	DSS-RSB-049-003
Depth		1.8-2.0	8.6-9.5	10.4-10.9	6.2-6.6	10.3-11.3	12.0-12.8
mg/kg		3/5/2007					
Benzene	0.057	0.401	78.5	53.4	4.91	67	95.5
Toluene	0.67	2.03	385	329	1.71	144	181
Ethylbenzene	3.6	0.098	736	641	67.2	735	880
m/p-xylenes	0.025	2.53	396	368	15.7	389	460
Naphthalene	0.48	0.377	5090	4590	784	5800	7980
Acenaphthene	0.62	0.622	1340	1330	278	1950	2500
Dibenzofuran	2	0.31	75.7	64.7	10.7	71.7	84
Fluorene	0.54	0.702	683	598	110	794	984
Phenanthrene	0.85	5.16	2150	1880	411	2780	3610
Fluoranthene	2.9	8.48	684	588	178	1140	1450
Pyrene	0.66	8.06	1020	896	250	1570	2010
Benzo[a]pyrene	0.43	4.29	306	264	84.4	498	614
Total PAH (16)	4	53.6	13600	12100	2600	18700	23400
Total PAH (42)	4	115	23600	21300	4030	27500	34000

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